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Federal Communications Commission
Office of the Secretary

Concern of a university research scientist and Director of the GA Sea Grant College Program about the LightSquared LTE wireless network plans and its impact on scientific research using existing GPS technology:

As a research scientist studying coastal marshes and estuaries I depend heavily on continuous access to GPS technology and it is critical to my research program. I am also Director of the GA Sea Grant College Program, and as such support research of other scientists in the State of Georgia who also rely heavily on GPS technology. Our research and outreach programs depend on GPS to precisely locate long-term research locations, track animals on a continuous basis, and to collect streaming data from moving rovers as only a few examples of GPS use in research. The impact of the proposed LightSquared system is significant because it will be using a high-powered system and frequencies (L band) normally used to transmit data to and from relatively low-power space-based satellites including GPS. The proposed use of very high power ground-based transmitters (a network of 40,000 new cell towers) will simply swamp the weak GPS signals we even now struggle to receive and depend on. If current plans for the LightSquared implementation is not rescinded, the research of many scientists funded by the National Science Foundation, Sea Grant and NOAA, and ultimately all taxpayers, is in jeopardy.

Concern has already been raised by the aviation, automotive, construction, agriculture industries and even the US military. LightSquared simply can't operate within the spectrum given to them by the FCC without impacting the everyday services GPS users now depend on. The current plan for LightSquared to limit its allocated spectrum use, still within the Mobile Satellite Spectrum (MSS), is not a solution. It will still impact high precision GPS receivers already in use across the coastal community. The power of the LightSquared base stations will still overwhelm the weak GPS signals. GPS was here first and LightSquared should be required to change their plans for use of the MSS band and use a frequency spectrum that will not interfere with any GPS receivers. No current GPS user should be required to change existing infrastructure to accommodate a new commercial operation of a single company.

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